STATE OF CALIFORNIA

AIR RESOURCES BOARD
2020 L STREET
P.O. BOX 2815
SACRAMENTO, CA 95812

PETE WILSON, Governor

February 28, 1994

Detlev E. Hasselmann
President
Hasstech Inc.
6985 Flanders Drive
San Diego, California 92121

#94-3

Dear Mr. Hasselmann:

Approval of the Hasstech Model CFC-1 Flow Control Valve

You requested California Air Resources Board (CARB) approval of the Hasstech Model CFC-1 flow control valve as an alternate to the certified Hasstech 1016-33 flow control valve.

Both the Hasstech 1016-33 and the new CFC-1 flow control valves are used on gasoline dispensers to open and close the vapor return line in response to fuel flow. The currently certified 1016-33 flow control valve comprises a sensor installed in the gasoline line and a hydraulically operated valve in the vapor line. The sensor is connected to the vapor valve by two hydraulic lines. When gasoline flows, there is a pressure drop across the sensor which is hydraulically transmitted to open the vapor valve.

The new CFC-1 incorporates these features of the 1016-33 valve into a valve body of 6 inches in length and 2 inches in diameter. Basically, the CFC-1 valve has the sensor and vapor valve combined into one unit. As gasoline enters the valve body, it moves a small target and stem connected to the vapor seat. The seat opens up the vapor line to let the vapors flow through. The valve seat closes when gasoline stops flowing. The CFC-1 valve is designed to open at a gasoline flow rate of at least 1 gallon per minute (gpm).

As required by the Air Resources Board certification procedures, you requested the approval of the Division of Occupational Safety and Health, the Office of the State Fire Marshal and the Department of Food and Agriculture, Division of Measurement Standards. The necessary approvals have been obtained from these agencies.

I find that the use of the Hasstech CFC-1 coaxial flow control valve, when installed in accordance with the manufacturer's instructions, will not adversely affect the performance of vapor recovery systems on which they are installed. Therefore, the Hasstech CFC-1 coaxial flow control valve as an

alternate to the Hasstech 1016-33 flow control valve, is certified for use with the Hasstech VCP 2/2A vapor recovery systems with approved bootless nozzle as specified in Executive Order G-70-7-AD or the latest version of the Order. Furthermore, upon installation, each CFC-1 coaxial flow control valve shall be checked to ensure that it meets the correct air to liquid ratio as specified in Executive Order G-70-7-AD or the latest version of the Order.

If you have any questions, please feel free to call Jorge Fernandez at (916) 445-0383 or Laura Sullivan McKinney at (916) 327-1525.

Sincerely,

James J. Morgester, Chief
Compliance Division

cc: Vapor Recovery Technical Committee